Cultural Anthropology Study Using the Fundamentals of Geography and GPS

By: Scott Royer
Harrison High School
West Lafayette, IN 47906

Estimated Time:
Two to Three Days-One in the field and one in the classroom

Grade Levels(s):
High School-Anthropology Course (Unit on Culture)

Purpose:
1. Introduce students to the concept of GPS, how it works and use it in the field
2. Give students a chance to culturally examine our burial practices using modern technology
3. Develop a description of our culture based off of information derived from using GPS in addition to conventional observation

Background:
Religion and ritual are two aspects of cultural anthropology. How people care for their dead can tell a lot about their culture. One of our earliest sign of a belief in the supernatural is evident from burial sites of Neanderthals in Western Europe. In the U.S., one can see regional differences in how people are buried. Variance can be determined by beliefs, economic standing and time period when one was buried.

A small cemetery provides an opportunity to analyze our past and near present local culture. Looking at the patterns of a graveyard as a whole will allow us to analyze its origins. A detailed study will give us insight into ourselves and how we remember and the importance of a deceased person.

Using GPS, a follow-up analysis of a created map will provide a different perspective on how the cemetery was organized. By looking at various data from above, we will be able to make additional observations, analysis and conclusions regarding our culture that might not be possible from the ground.

Upon completion of this activity, students will be able to:

- explain how GPS systems work.
- use the basic functions of a GPS system.
- construct a map, using GPS.
- locate the cemetery's origin.
- explain how time is related to burial sites.
- correlate burial and ritual with culture.
- distinguish between types of burial stones.

Materials Required:

- Four hand-held GPS systems
- Notebooks
- Access to computers for downloads of GPS information and word processing
- A cemetery (located adjacent to Harrison High School)

Procedures:

- Give introduction to GPS including how it works and how it will be used in this activity
- Brainstorm the concept of cemetery to get a feel about their background
- Assign groups at random or allow them to select (no more than 4 per group)
- Proceed to the cemetery and allow students to begin plotting data
- Each student must operate the GPS unit
- Students will form groups of three to four people
- Each student will be responsible for one of the following functions:

  1. One to two students to operate the GPS unit, plotting each head stone with accompanying description
  2. Two other students to log in data that corresponds to the given points (This will also depend on the GPS unit being used)
  3. One student to note general observations

- Students will develop a criteria for each stones which will include:

  1. Stones categorized by name
  2. Stones categorized by condition
  3. Stones categorized by their elaborateness
  4. Stones categorized by religion/symbolism if notable
  5. Male/Female
  6. Date of death/age of deceased

- Enter data onto system-into mapping software if available-if not, use Excel to download
- Analyze data
- Write up results (each group will turn in one)
- Briefly discuss results to the class

Assessment:
Each group will turn in one written product. It can be in outline form or written out. It should include:

- The map they have developed using GPS

- The analysis of the various stones in relation to their location
- Identification of the point of origin of the cemetery and their reasoning
- A Criteria sheet indicating how stones were categorized
- An analysis of the inventoried stones (What kind of patterns do they note?)
- An analysis of our culture using burial as the example
- A hypothesis on why the cemetery is located where it is

Geography Standards Addressed:
INDIANA
Standard 1: The World in Spatial Terms
Students will use GPS to acquire and process information about people, places and environments.
- *WG.1.3* Use locational technology (remote sensing, Global Positioning Systems [GPS] and Geographic Information Systems [GIS]) in order to establish spatial relationships.
Standard 4: Human Systems
Students will identify and analyze the human activities that shape the Earth's surface, specifically rural and urban land use and cultural patterns.
- *WG.4.3* Hypothesize about the impact of push/pull factors on human migration in selected regions and about the changes in these factors over time. (Economics; Civics and Government; History, Individuals, Society, and Culture)
- *WG.4.8* Map the distribution patterns of the world's major religions, and identify architectural features associated with each. (History; Individuals, Society, and Culture)
- *WG.4.19* Demonstrate that change on Earth is constant, in both the physical and the cultural realm, and that the movement of populations, goods and ideas creates ever-altering spatial patterns. (Economic; Civics and Government; History; Individuals, Society, and Culture)

NATIONAL
Places and Regions - The physical and human characteristics of places
Human Systems -
- The patterns and networks of economic interdependence on the earths surface
- The process, patterns, and functions of human settlement
Environment and Society - How human actions modify the physical environment
Uses of Geography - How to apply geography to interpret the past

Extensions and Adaptations:
· Give data/maps to the county for their records if none is available
· Research records from the county and see if data obtained by GIS matches the county records
· Analyze and cross compare data with other student groups
· Explore restoration techniques-guest speaker from local organization
· Bound class results and give to school library to be used for future reference
· Plot any symbols and research their meanings
· Essay questions on future test referring to this study

Resources:

Ember, Carol R. and Melvin. Anthropology. Prentice Hall. New Jersey, 1999.
http://www.savinggraves.com/index.htm 6/13/02

Rubric:

Group _____

Did students successfully plot and map out the graveyard using the GPS? 20 _____
Did students come up with a hypothesis explaining the origins? 10 _____
Did students come up with a hypothesis explaining the terrain as it relates to the location of the grave yard? 10 _____
Did students explain how time is related to the types of stones? 10 _____
Did students differentiate between stones and discuss how and why they varied? 10 _____
Did all students use the GPS unit? 5 _____
Did students make good use of time? 5 _____
Did students make a brief presentation of hypotheses to class? 10 _____

Total:

80 _____